

## Bug Monitoring

By Dominique Sharteer



We toured Coal Creek Park in Bellevue to look for “bugs” in the stream as part of a project to sample for what are called macro-invertebrates. At the site, there were a lot of big rocks and the creek’s current was pretty fast. You can see fish and logs in certain places and in the creek there were bugs I had never seen before. I was expecting to see flies, worms and even cockroaches. I wasn’t expecting to find the different insects

that we did. We got to look at some of the bugs using field microscopes.

We looked for bugs as a way to find out if a stream is clean and if there is food for fish. If the water in the stream is not polluted then King County Science staff posts this information on their website [www.kingcounty.gov/enviroment/data-and-trends/monitoring-data/stream-bugs](http://www.kingcounty.gov/enviroment/data-and-trends/monitoring-data/stream-bugs). This website provides information on which streams or doing well and the bug conditions.

I learned that some of the bugs are “tolerant,” meaning they can survive in clean water or dirty water. Other bugs are considered non-tolerant, and will die right away if they are in dirty water. And there are bugs that are somewhat tolerant, which means some will die and some will live. It all depends on how polluted the water is.

There is this interesting bug called a caddis fly. We found some caddis fly larva and learned that these are one of the tolerant bugs. As a worm, its saliva is like glue and before this insect becomes full grown it eats a lot and then sleeps for a long time in a cocoon that it built. Its cocoon is built out of small pebbles in the creek and the saliva is used to help build its cocoon. In



*Nasir Sheikh studying bugs.*

the cocoon it changes to a long-winged fly and lay eggs that turn into worms and starts the process all over again.

There are other bugs that don’t have legs and they are just slimy like worms. They are very disgusting looking. Most of these bugs except a few can’t survive unless they are in water and the others that could survive have to wait until they grow their wings. So they can fly away. Also, hornets eat some of these bugs.

It is a good thing that I learned about the relationship between bugs and clean water in streams. I can now go look at streams and kind of know if they are polluted or not and I leaned about different types of bugs that I didn’t know existed before.



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